

## CLAIMS:

1. An optical record carrier for use in an optical scanning device, the optical record carrier comprising an entrance face, an information layer and at least one transparent layer, located between the entrance face and the information layer, through which data is to be read from the information layer, wherein the information layer includes a relief structure holding data in read-only form,

characterized in that the data held in the relief structure includes thickness variation data indicative of a variation in the thickness of the optical record carrier between the entrance face and the information layer, due to a variation in the thickness of the at least one transparent layer.

2. An optical record carrier according to claim 1, wherein said data held in the relief structure includes data indicating a thickness profile in terms of a set of thickness data, each item in the set being indicative of a thickness deviation at a different one of a plurality of locations across the entrance face.

3. An optical record carrier according to claim 1, wherein said data held in the relief structure includes data indicating a thickness profile comprising a set of thickness function parameters which, when combined using a predetermined algorithm, provide a function indicative of a thickness profile across the entrance face.

4. An optical record carrier according to any one of the preceding claims, wherein said relief structure comprises a pit/land structure holding the thickness variation data.

5. An optical record carrier according to any of claims 1 to 3, wherein said relief structure comprises a groove structure having a wobble pattern holding the thickness variation data.

6. An optical record carrier according to any one of the preceding claims, wherein the record carrier is in the form of a disc, and the thickness variation data indicates a radial thickness profile.

5 7. A method of scanning an optical record carrier in an optical scanning device having an optical system capable of spherical aberration compensation, the optical record carrier comprising an entrance face, an information layer and at least one transparent layer, located between the entrance face and the information layer, through which data is to be read from the information layer, wherein the information layer includes thickness variation data  
10 indicative of a variation in the thickness of the optical record carrier between the entrance face and the information layer, due to a variation in the thickness of the at least one transparent layer and comprises a relief structure holding data in read-only form, the method including the optical scanning device reading the thickness variation data and adjusting the optical system when scanning across the entrance face to  
15 perform spherical aberration compensation based on the thickness variation data, characterized in that the optical scanning device reads data held in the relief structure to obtain said thickness variation data.

8. A method according to claim 7, in which the step of adjusting the optical  
20 system when scanning across the entrance face includes:  
evaluating the thickness variation data in accordance with a predetermined algorithm so as to generate thickness indicators for at least one of a plurality of selected locations across the entrance face;  
converting the or each thickness indicator into data indicative of a spherical  
25 aberration compensation value in accordance with a predetermined conversion function; and  
operating the optical scanning system in accordance with the spherical aberration compensation value so as to compensate for spherical aberration at the or each selected location.

30 9. A method of manufacturing an optical record carrier for use in an optical scanning device, the optical record carrier comprising an entrance face, an information layer and at least one transparent layer, located between the entrance face and the information layer, through which data is to be read from the information layer, wherein the method

comprises the step of stamping at least part of the information layer to include a relief structure holding data in read-only form, and subsequently forming the transparent layer,

characterized in that the data held in the relief structure includes thickness variation data indicative of a variation in the thickness of the optical record carrier between the entrance face and the information layer, due to a variation in the thickness of the at least one transparent layer.

10. A method according to claim 9, wherein the method comprises forming the transparent layer by spin coating.